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DEPARTMENT OF THE NAVY
NAVAL FACILITIES
ENGINEERING COMMAND
GUIDE SPECIFICATION

NFGS-13282
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REMOVAL AND DISPOSAL OF MATERIAL CONTAINING LEAD

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SECTION 13282

REMOVAL AND DISPOSAL OF MATERIAL CONTAINING LEAD
06/97

NOTE: This guide specification covers the requirements and procedures for limiting occupational and environmental exposure to lead when removing material containing lead (MCL). This guide specification is intended for use in projects where MCL must be removed other than lead based paint or lead based paint hazards as defined by Public Law 102-550 Title X - Residential Lead Based Paint Hazard Reduction Act of 1992. The classification of the MCL as hazardous waste must be considered in the design phase of the project and in accordance with 40 CFR 261. This classification is prerequisite to the requirement of special handling, storage, and disposal according to federal and local hazardous waste management regulations and is therefore critical to the proper bidding of the project.

NOTE: Obtain, from the activity, information on MCL to be removed by the project.

NOTE: Projects that involve cutting, sawing, sanding, scraping, abrasive blasting, high temperature cutting, etc., of MCL may result in lead exposures in excess of OSHA limits. Therefore, appropriate engineering controls and, where necessary, personal protective equipment should be devised and used. Institute worker protection controls as indicated in 29 CFR 1926.62 and herein.

NOTE: Drawings should indicate total quantity of MCL to be removed or they should provide sufficient information so that bidders may determine the total quantity of MCL to be removed.

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred within the text by the

basic designation only.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI Z9.2	(1979; R 1991) Fundamentals Governing the Design and Operation of Local Exhaust Systems
ANSI Z88.2	(1992) Respiratory Protection

CODE OF FEDERAL REGULATIONS (CFR)

29 CFR 1926.21	Safety Training and Education
29 CFR 1926.33	Access to Employee Exposure and Medical Records
29 CFR 1926.55	Gases, Vapors, Fumes, Dusts, and Mists
29 CFR 1926.59	Hazard Communication
29 CFR 1926.62	Lead Exposure in Construction
29 CFR 1926.65	Hazardous Waste Operations and Emergency Response
29 CFR 1926.103	Respiratory Protection
40 CFR 260	Hazardous Waste Management Systems: General
40 CFR 261	Identification and Listing of Hazardous Waste
40 CFR 262	Generators of Hazardous Waste
40 CFR 263	Transporters of Hazardous Waste
40 CFR 264	Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
40 CFR 265	Interim Status Standard for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
40 CFR 268	Land Disposal Restrictions
40 CFR 745	Lead; Requirements for Lead-Based Paint Activities
49 CFR 172	Hazardous Materials, Tables, and Hazardous Materials Communications Regulations
49 CFR 178	Shipping Container Specification

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT (HUD)

HUD Guidelines	(June 1995) Guidelines for the Evaluation and Control of Lead Based Paint Hazards in Housing

UNDERWRITERS LABORATORIES INC. (UL)

UL 586 (1990; R1995) High-Efficiency, Particulate, Air Filter Units

1.2 DEFINITIONS

1.2.1 Action Level

Employee exposure, without regard to use of respirators, to an airborne concentration of lead of 30 micrograms per cubic meter of air averaged over an 8 hour period.

1.2.2 Area Sampling

Sampling of lead concentrations within the lead control area and inside the physical boundaries which is representative of the airborne lead concentrations but is not collected in the breathing zone of personnel (approximately \^1.5 to 1.8 meters^\ \~5 to 6 feet~\ above the floor).

1.2.3 Competent Person (CP)

As used in this section, refers to a person employed by the Contractor who is trained in the recognition and control of lead hazards in accordance with current federal, State, and local regulations and has the authority to take prompt corrective actions to control the lead hazard. An industrial hygienist certified by the American Board of Industrial Hygiene or a safety professional certified by the Board of Certified Safety Professionals is the best choice.

1.2.4 Contaminated Room

Room for removal of contaminated personal protective equipment (PPE).

1.2.5 Decontamination Shower Facility

That facility that encompasses a clean clothing storage room, and a contaminated clothing storage and disposal rooms, with a shower facility in between.

1.2.6 Eight-Hour Time Weighted Average (TWA)

Airborne concentration of lead to which an employee is exposed, averaged over an 8 hour workday as indicated in 29 CFR 1926.62.

1.2.7 High Efficiency Particulate Air (HEPA) Filter Equipment

HEPA filtered vacuuming equipment with a UL 586 filter system capable of collecting and retaining lead-contaminated particulate. A high efficiency particulate filter demonstrates at least 99.97 percent efficiency against 0.3 micron or larger size particles.

1.2.8 Lead

Metallic lead, inorganic lead compounds, and organic lead soaps. Excludes

other forms of organic lead compounds.

1.2.9 Material Containing Lead (MCL)

Any material which contains lead as determined by the testing laboratory using a valid test method. The requirements of this section does not apply if no detectable levels of lead are found using a valid detection method.

1.2.10 Lead Control Area

A temporary area or structure or containment, sometimes equipped with HEPA filtered local exhaust, that prevents the spread of lead dust or debris. Usually critical barriers and physical boundaries are employed to isolate the lead control area and to prevent migration of lead contamination and unauthorized entry of personnel.

1.2.11 Lead Permissible Exposure Limit (PEL)

Fifty micrograms per cubic meter of air as an 8 hour time weighted average as determined by 29 CFR 1926.62. If an employee is exposed for more than eight hours in a work day, the PEL shall be determined by the following formula:

PEL (micrograms/cubic meter of air) = 400/No. hrs worked per day

1.2.12 Personal Sampling

Sampling of airborne lead concentrations within the breathing zone of an employee to determine the 8 hour time weighted average concentration in accordance with 29 CFR 1926.62. Samples shall be representative of the employees' work tasks. Breathing zone shall be considered an area within a hemisphere, forward of the shoulders, with a radius of \^150 to 225 mm^\ \~six to nine inches~\ and centered at the nose or mouth of an employee.

1.2.13 Physical Boundary

Area physically roped or partitioned off around lead control area to limit unauthorized entry of personnel.

1.3 DESCRIPTION OF WORK

****

NOTE: Specify an approximate quantity of MCL to be removed or disturbed. Provide an indication of its condition (well adhered sheets or wrappings, solid, aggregates, bricks or blocks, powdered, liquid, sludge, etc.) and provide a general description of the location of the MCL (on doors, walls, windows, ceilings, floors, piping, electrical cable, soil, sand, impregnated equipment, or building materials, etc.).

****

Remove [_____] [square \^meters^\ \~feet~\] [cubic \^meters^\ \~yards~\] [\^kilograms^\ \~pounds~\ \~tons~\] [\^liters^\ \~gallons~\] [linear \^meters^\ \~feet~\] of material containing lead in [_____] condition, located [_____] and as indicated on the drawings.

1.4 SUBMITTALS

****

NOTE: Where a "G" in asterisk tokens follows a submittal item, it indicates Government approval for that item. Add "G" in asterisk tokens following any

added or existing submittal items deemed sufficiently critical, complex, or aesthetically significant to merit approval by the Government. Submittal items not designated with a "G" will be approved by the QC organization.

****

Submit the following in accordance with Section entitled "Submittal Procedures."

1.4.1 SD-02, Manufacturer's Catalog Data

a. Vacuum filters G

b. Respirators G

1.4.2 SD-06, Instructions

a. Chemicals and equipment G

b. Material safety data sheets for all chemicals G

1.4.3 SD-08, Statements

a. Qualifications of CP G

b. Testing laboratory qualifications G

****

NOTE: See Criteria Notes in paragraphs entitled "Air and Wipe Sampling" and "Clearance Certification" to determine whether this item should be included in the project.

****

[c. Third party consultant qualifications G

d. Material Containing Lead Removal Plan including CP approval (signature, date, and certification number) G

e. Rental equipment notification G

f. Respiratory protection program G

g. Hazard communication program G

h. EPA approved hazardous waste treatment or disposal facility for lead disposal G

i. Hazardous waste management plan G

j. Assessment data report G

1.4.3.1 Qualifications of CP

Submit name, address, and telephone number of the CP selected to perform responsibilities specified in paragraph entitled "Competent Person (CP) Responsibilities." Provide previous experience of the CP. Submit proper documentation that the CP is trained [and licensed] [and certified] in accordance with federal, State, and local laws.

1.4.3.2 Testing Laboratory

Submit the name, address, and telephone number of the testing laboratory selected to perform the air [and wipe] sampling, testing, and reporting of airborne concentrations of lead. Use a laboratory participating in the EPA National Lead Laboratory Accreditation Program (NLLAP) by being accredited by either the American Association for Laboratory Accreditation (A2LA) or the American Industrial Hygiene Association (AIHA) and that is successfully participating in the Environmental Lead Proficiency Analytical Testing (ELPAT) program to perform sample analysis.

1.4.3.3 Material Containing Lead Removal Plan (MCLRP)

Submit a detailed job-specific plan of the work procedures to be used in the removal of MCL. The plan shall include a sketch showing the location, size, and details of lead control areas, critical barriers, physical boundaries, location and details of decontamination facilities, viewing ports, and mechanical ventilation system. Include in the plan, eating, drinking, smoking and sanitary procedures, interface of trades, sequencing of lead related work, collected waste water and dust containing lead and debris, air sampling, respirators, personal protective equipment, and a detailed description of the method of containment of the operation to ensure that airborne lead concentrations of 30 micrograms per cubic meter of air [and baseline lead dust concentrations] are not reached or exceeded outside of the lead control area. Include occupational and environmental sampling, training and strategy, sampling and analysis strategy and methodology, frequency of sampling, duration of sampling, and qualifications of sampling personnel in the air sampling portion of the plan.

1.4.3.4 [Third Party Consultant Qualifications

****
NOTE: See Criteria Notes in paragraphs entitled "Air and Wipe Sampling" and "Clearance Certification" to determine whether this paragraph should be included in the project.
****

Submit the name, address and telephone number of the third party consultant selected to perform the wipe sampling for determining concentrations of lead in dust. Submit proper documentation that the consultant is trained and certified as an inspector technician or inspector/risk assessor by the USEPA authorized State (or local) certification and accreditation program.]

1.4.4 SD-12, Field Test Reports

a. Sampling results G

b. Assessment Data Report G

1.4.4.1 Occupational and Environmental Sampling Results

Submit occupational and environmental sampling results to the Contracting Officer within three working days of collection, signed by the testing

laboratory employee performing the analysis, the employee that performed the sampling, and the CP.

a. The sampling results shall represent each job classification, or if

working conditions are similar to previous jobs by the same employer, provide previously collected exposure data that can be used to estimate worker exposures per 29 CFR 1926.62. The data shall represent the worker's regular daily exposure to lead.

b. Submit worker exposure data conducted during the task based trigger operations of 29 CFR 1926.62.

c. The initial monitoring shall determine the requirements for further monitoring and the need to fully implement the control and protective requirements including the compliance program (MCLRP) per 29 CFR 1926.62.

1.4.4.2 Occupational and Environmental Assessment Data Report

Some MCL removal work may not require full implementation of the requirements of 29 CFR 1926.62. Based on the experience of the Contractor and/or the use of a specific process or method for performing the work, the Contractor may be able to provide historic data (previous 12 months) to demonstrate that airborne exposures are controlled below the action level. Such methods or controls shall be fully presented in the MCLRP. In order to reduce the full implementation of 29 CFR 1926.62, the Contractor shall provide documentation in an Assessment Data Report.

Submit occupational and environmental assessment report to the Contracting Officer prior to start of work, signed by the testing laboratory employee performing the analysis, and the CP.

a. Submit a report that supports the determination regarding the reduction of the need to fully implement the requirements of 29 CFR 1926.62 and supporting the MCLRP. The exposure assessment shall represent each job classification, or if working conditions are similar to previous jobs by the same employer, provide previously collected exposure data that can be used to estimate worker exposures per 29 CFR 1926.62. The data shall represent the worker's regular daily exposure to lead for stated work.

b. Submit worker exposure data conducted during the task based trigger operations of 29 CFR 1926.62 with a complete process description in supporting a negative assessment.

c. The initial assessment shall determine the requirement for further monitoring and the need to fully implement the control and protective requirements including the compliance program (MCLRP) per 29 CFR 1926.62.

1.4.5 SD-13, Certificates

a. Vacuum filters G

1.4.6 SD-18, Records

a. Completed and signed hazardous waste manifest from treatment or disposal facility G

b. Certification of medical examinations G

c. Employee training certification G

1.5 QUALITY ASSURANCE

1.5.1 Medical Examinations

Initial medical surveillance as required by 29 CFR 1926.62 shall be made available to all employees exposed to lead at any time (1 day) above the action level. Full medical surveillance shall be made available to all employees on an annual basis who are or may be exposed to lead in excess of the action level for more than 30 days a year or as required by 29 CFR 1926.62. Adequate records shall show that employees meet the medical surveillance requirements of 29 CFR 1926.33, 29 CFR 1926.62 and 29 CFR 1926.103.

1.5.1.1 Medical Records

Maintain complete and accurate medical records of employees for the duration of employment plus 30 years.

1.5.1.2 Medical Surveillance

Provide medical surveillance to all personnel exposed to lead as indicated in 29 CFR 1926.62.

1.5.2 Competent Person (CP) Responsibilities

a. Certify training as meeting all federal, State, and local requirements.

b. Review and approve Material Containing Lead Removal Plan (MCLRP) for conformance to the applicable referenced standards.

c. Continuously inspect MCL removal work for conformance with the approved plan.

d. Perform air and non-clearance type wipe sampling.

e. Ensure work is performed in strict accordance with specifications at all times.

f. Control work to prevent hazardous exposure to human beings and to the environment at all times.

g. Certify the conditions of the work as called for elsewhere in this specification.

1.5.3 Training

Train each employee performing lead removal work, MCL disposal, and air sampling operations prior to the time of initial job assignment and annually thereafter, in accordance with 29 CFR 1926.21, 29 CFR 1926.62, and State and local regulations where appropriate.

1.5.3.1 Training Certification

****

NOTE: State or local regulations may consider MCL removal work as "lead based paint hazard reduction

activities" even if the work does not include lead based paint. The training provider may be required to be "accredited" by either the State or the United States Environmental Protection Agency (USEPA).

****

Submit a certificate for each employee, signed and dated by the [accredited] training provider, stating that the employee has received the required lead training.

1.5.4 Respiratory Protection Program

a. Furnish each employee required to wear a respirator with a respirator fit test at the time of initial fitting and at least every six months thereafter as required by 29 CFR 1926.62.

b. Establish and implement a respiratory protection program as required by ANSI Z88.2, 29 CFR 1926.103, 29 CFR 1926.62, and 29 CFR 1926.55.

1.5.5 Hazard Communication Program

Establish and implement a Hazard Communication Program as required by 29 CFR 1926.59.

1.5.6 Hazardous Waste Management

The Hazardous Waste Management Plan shall comply with applicable requirements of federal, State, and local hazardous waste regulations and address:

a. Identification and classification of hazardous wastes associated with the work.

b. Estimated quantities of wastes to be generated and disposed of.

c. Names and qualifications of each contractor that will be transporting, storing, treating, and disposing of the wastes. Include the facility location [and operator] and a 24-hour point of contact. Furnish two copies of [USEPA] [State] [and] [local] hazardous waste [permit applications] [permits] [manifests] [and] [USEPA Identification numbers].

d. Names and qualifications (experience and training) of personnel who will be working on-site with hazardous wastes.

e. List of waste handling equipment to be used in performing the work, to include cleaning, volume reduction, and transport equipment.

f. Spill prevention, containment, and cleanup contingency measures including a health and safety plan to be implemented in accordance with 29 CFR 1926.65.

g. Work plan and schedule for waste containment, removal and disposal. Wastes shall be cleaned up and containerized daily.

h. Unit cost for hazardous waste disposal according to this plan.

1.5.7 Environmental, Safety and Health Compliance

****

NOTE: Include applicable State, regional, and local laws, regulations, and statutes. Do careful research since not all State and local laws are

similar. Verify with the State or local authorities whether the city, county, State and/or the USEPA has jurisdiction and whether licensing and/or certification is required. Also identify the authority or code sponsor and the laws, regulations and statutes cited below under paragraph entitled "References" using complete title and number.
****

In addition to the detailed requirements of this specification, comply with laws, ordinances, rules, and regulations of federal, State, and local authorities regarding lead. Comply with the applicable requirements of the current issue of 29 CFR 1926.62. Submit matters regarding interpretation of standards to the Contracting Officer for resolution before starting work. Where specification requirements and the referenced documents vary, the most stringent requirement shall apply. [The following [local] [and] [State] laws, ordinances, criteria, rules and regulations regarding removing, handling, storing, transporting, and disposing of lead-contaminated materials apply:

a. [_____]

b. [_____]

c. [_____]]

[[Licensing] [and certification] in the state of [_____] is required.]

1.5.8 Pre-Construction Conference

Along with the CP, meet with the Contracting Officer to discuss in detail the Hazardous Waste Management Plan and the Material Containing Lead Removal Plan, including work procedures and precautions for the removal plan.

1.6 EQUIPMENT

1.6.1 Respirators

Furnish appropriate respirators approved by the National Institute for Occupational Safety and Health (NIOSH), Department of Health and Human Services, for use in atmospheres containing lead dust, fume and mist. Respirators shall comply with the requirements of 29 CFR 1926.62.

1.6.2 Special Protective Clothing

Furnish personnel who will be exposed to lead-contaminated dust with proper disposable [uncontaminated, reusable] protective whole body clothing, head covering, gloves, eye, and foot coverings as required by 29 CFR 1926.62. Furnish proper disposable plastic or rubber gloves to protect hands. Reduce the level of protection only after obtaining approval from the CP.

1.6.3 Rental Equipment Notification

If rental equipment is to be used during MCL handling and disposal, notify the rental agency in writing concerning the intended use of the equipment. Furnish a copy of the written notification to the Contracting Officer.

1.6.4 Vacuum Filters

UL 586 labeled HEPA filters.

1.6.5 Equipment for Government Personnel

****
NOTE: Verify the number of sets required with OICC/ROICC.
****

Furnish the Contracting Officer with [two] [_____] complete sets of personal protective equipment (PPE) daily, as required herein, for entry into and inspection of the lead removal work within the lead controlled area. Personal protective equipment shall include disposable whole body covering, including appropriate foot, head, eye, and hand protection. PPE shall remain the property of the Contractor. Respiratory protection for the Contracting Officer will be provided by the Government.

PART 2 PRODUCTS

2.1 CHEMICALS

Submit applicable Material Safety Data Sheets for all chemicals used in lead removal work. Use the least toxic product approved by the Contracting Officer.

PART 3 EXECUTION

3.1 PROTECTION

3.1.1 Notification

Notify the Contracting Officer [20] [_____] days prior to the start of any lead work.

3.1.2 Lead Control Area Requirements

****
NOTE: Choose the first paragraph if MCL will be removed by means which will not create airborne, dust containing lead (such as carefully unfastening sheets containing lead from walls). Choose the second paragraph if removal practice will create airborne, dust containing lead (such as sanding, sawing, grinding, thermal cutting or digging or demolition activities).
****

[Establish a lead control area by completely establishing critical barriers and physical boundaries around the area or structure where MCL removal operations will be performed.]

****
NOTE: The Designer should consider the use of viewing ports for lead control areas under \^100 square meters^\ \~1,000 square feet~\ to save

inspection time.

****

****

NOTE: Select the control method that will ensure efficiency and airborne lead levels below the action level of 30 ug/m3 outside of the lead control area.
****

[Full containment - Contain removal operations by the use of [critical barriers] [and HEPA filtered exhaust] [a negative pressure enclosure system with decontamination facilities and with HEPA filtered exhaust if required by the CP]. For containment areas larger than \^100 square meters^\ \~1,000 square feet~\ install a minimum of two \^450 mm^\ \~18 inch~\ square viewing ports. Locate ports to provide a view of the required work from the exterior of the enclosed contaminated area. Glaze ports with laminated safety glass.]

3.1.3 Protection of Existing Work to Remain

Perform work without damage or contamination of adjacent areas. Where existing work is damaged or contaminated, restore work to its original condition or better as determined by the Contracting Officer.

3.1.4 Boundary Requirements

3.1.4.1 Physical Boundary

Provide physical boundaries around the lead control area by roping off the area designated in the work plan or providing curtains, portable partitions or other enclosures to ensure that airborne concentrations of lead will not reach 30 micrograms per cubic meter of air outside of the lead control area.

3.1.4.2 Warning Signs

Provide warning signs at approaches to lead control areas. Locate signs at such a distance that personnel may read the sign and take the necessary precautions before entering the area. Signs shall comply with the requirements of 29 CFR 1926.62.

3.1.5 Furnishings

****
NOTE: Verify with the activity furniture/equipment requirements.
****

[The Government will remove furniture and equipment from the building before lead hazard abatement work begins.]

[Furniture [_____] and equipment will remain in the [building] [lead control area]. Protect and cover furnishings or remove furnishings from the work area and store in a location approved by the Contracting Officer.]

[Existing [furniture] [and] [equipment] is lead contaminated, [decontaminate] [dispose of as lead contaminated waste].]

3.1.6 Heating, Ventilating and Air Conditioning (HVAC) Systems

Shut down, lock out, and isolate HVAC systems that supply, exhaust, or pass through the lead control areas. Seal intake and exhaust vents in the lead control area with \^0.15 mm^\ \~6 mil~\ plastic sheet and tape. Seal seams in HVAC components that pass through the lead control area. [Provide

temporary HVAC system for areas in which HVAC has been shut down outside the lead control area.]

3.1.7 Decontamination Shower Facility

Provide clean and contaminated change rooms and shower facilities in accordance with this specification and 29 CFR 1926.62.

3.1.8 Eye Wash Station

Where eyes may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes shall be provided within the work area.

3.1.9 Mechanical Ventilation System

a. Use adequate ventilation to control personnel exposure to lead in accordance with 29 CFR 1926.62.

b. To the extent feasible, use fixed local exhaust ventilation connected to HEPA filters or other collection systems, approved by the CP. Local exhaust ventilation systems shall be designed, constructed, installed, and maintained in accordance with ANSI Z9.2.

c. Vent local exhaust outside the building only and away from building ventilation intakes.

d. Use locally exhausted, power actuated tools or manual hand tools.

3.1.10 Personnel Protection

Personnel shall wear and use protective clothing and equipment as specified herein. Eating, smoking, or drinking or application of cosmetics is not permitted in the lead control area. No one will be permitted in the lead control area unless they have been appropriately trained and provided with protective equipment.

3.2 WORK PROCEDURES

Perform lead work in accordance with approved MCLRP. Use procedures and equipment required to limit occupational exposure and environmental contamination with lead when lead hazard abatement is performed in accordance with 29 CFR 1926.62 [or] [40 CFR 745], and as specified herein. Dispose of all MCL and associated waste in compliance with federal, State, and local requirements.

3.2.1 Personnel Exiting Procedures

Whenever personnel exit the lead-controlled area, they shall perform the following procedures and shall not leave the work place wearing any clothing or equipment worn in the control area:

a. Vacuum themselves off.

b. Remove protective clothing in the contaminated change room, and place them in an approved impermeable disposal bag.

****

NOTE: Showering is the preferred method of personal

decontamination. However, extenuating circumstances may prevent the use of a shower at the work site. In that event, choose the alternate selection. Note that the alternate is generally a very expensive method and should be used only when showering at the site is unfeasible.

****

[c. Shower.]

[c. Wash hands and face at the site, don appropriate disposable or uncontaminated resuable clothing, move to an appropriate shower facility, shower.]

d. Change to clean clothes prior to leaving the clean clothes storage area.

3.2.2 Air and Wipe Sampling

Air sample for lead in accordance with 29 CFR 1926.62 and as specified herein. Air and non-clearance wipe sampling shall be directed or performed by the CP.

a. The CP shall be on the job site directing the air and non-clearance wipe sampling and inspecting the MCL removal work to ensure that the requirements of the contract have been satisfied during the entire MCL operation.

b. Collect personal air samples on employees who are anticipated to have the greatest risk of exposure as determined by the CP. In addition, collect air samples on at least twenty-five percent of the work crew or a minimum of two employees, whichever is greater, during each work shift.

c. Submit results of air samples, signed by the CP, within 72 hours after the air samples are taken. Notify the Contracting Officer immediately of exposure to lead at or in excess of the action level of 30 micrograms per cubic meter of air outside of the lead control area.

****

NOTE: Include the following paragraph for high profile, sensitive work such as present in family housing, child care facilities, administrative buildings, kitchens, barracks, etc. Use the following paragraph along with clearance certification by a third party consultant specified in paragraph entitled "Clearance Certification" to determine if significant contamination was due to the contract work.

Surface dust sampling to determine clearance (i.e., that the work has not contaminated surfaces within and adjacent to the control area) should be performed by a third party to reduce a conflict of

interest. Samples must be conducted by an individual not paid or employed or otherwise compensated by the MCL removal Contractor. State or local regulations may require third party testing if the MCL removal operation is considered a lead

hazard reduction activity.
****

[d. Before any work begins, a third party consultant shall collect and analyze baseline wipe [or soil] samples in accordance with methods defined by federal, State, and local standards inside and outside of the physical boundary to assess the degree of dust contamination in the facility prior to MCL removal.]

3.2.2.1 Air Sampling During Material Containing Lead Removal Work

Conduct area air sampling at least daily in areas immediately adjacent to the lead control area on each shift in which lead hazard abatement operations are performed. Sufficient area monitoring shall be conducted to ensure unprotected personnel outside of the control area are not exposed at or above 30 micrograms per cubic meter of air. If 30 micrograms per cubic meter of air is reached or exceeded, stop work, correct the conditions(s) causing the increased levels. Notify the Contracting Officer immediately. Determine if condition(s) require any further change in work methods. Removal work shall resume only after approval is given by the CP and the Contracting Officer. For outdoor operations, at least one sample on each work shift shall be taken on the downwind side of the lead control area at a site selected by the CP and approved in advance by the Contracting Officer.

3.2.3 Material Containing Lead Removal

****

NOTE: Use bracketed prohibition on manual and power sanding/grinding of MCL surfaces when appropriate. Large scale manual or power sanding/grinding of MCL surfaces should never be allowed in family housing, child care facilities, administrative buildings, galleys, barracks, etc., due to problems associated with the resulting dust fallout/contamination of crevices and cracks which may retain unseen quantities of lead-contaminated dust. Use of these techniques for exteriors should be limited because the resulting airborne dust could result in significant contamination of the ground in the immediate vicinity of the facility. Manual or power sanding/grinding of MCL surfaces may be an acceptable work method only if appropriate engineering controls for personnel/environmental protection are in place.

****

[Manual or power sanding or grinding of MCL is not permitted.] Provide methodology for removing MCL in the MCLRP.

Select MCL removal processes to minimize contamination of work areas outside the control area with lead-contaminated dust or other lead-contaminated debris/waste and to ensure that unprotected personnel are not exposed to hazardous concentrations of lead. Describe this MCL removal process in the MCLRP.

3.2.3.1 Material Containing Lead - Indoor Removal

Perform [manual] [mechanical] removal [and thermal cutting] in the lead control areas using enclosures, barriers or containments [and powered

locally exhausted tools]. Collect residue [debris] for disposal in accordance with federal, State, and local requirements.

3.2.3.2 Material Containing Lead - Outdoor Removal

Perform outdoor removal as indicated in federal, State, and local regulations and in the MCLRP. The worksite preparation (barriers or containments) shall be job dependent and presented in the MCLRP.

3.2.3.3 Sampling After MCL Removal

After the visual inspection, [conduct soil sampling if bare soil is present during external removal operations and] collect air samples inside and outside the lead control area. Collect wipe [and soil] samples according to the HUD protocol contained in HUD Guidelines to determine the lead content of settled dust in micrograms per square \^meter^\ \~foot~\ of surface area [and parts per million (ppm) or micrograms per gram (mg/g) for soil].

3.2.4 Cleanup and Disposal

3.2.4.1 Cleanup

Maintain surfaces of the lead control area free of accumulations of dust and debris. Restrict the spread of dust and debris; keep waste from being distributed over the work area. Do not dry sweep or use pressurized air to clean up the area. At the end of each shift and when the lead operation has been completed, clean the controlled area of visible contamination by vacuuming with a HEPA filtered vacuum cleaner, wet mopping the area and wet wiping the area as indicated by the MCLRP. Reclean areas showing dust or debris. After visible dust and debris is removed, wet wipe and HEPA vacuum all surfaces in the controlled area. If adjacent areas become contaminated at any time during the work, clean, visually inspect, and then wipe sample all contaminated areas. The CP shall then certify in writing that the area has been cleaned of lead contamination before clearance testing.

3.2.4.2 Clearance Certification

****

NOTE: Include the second paragraph and edit accordingly for high profile, sensitive work such as present in family housing, child care facilities, administrative buildings, kitchens, barracks, etc. or the conversion of industrial lead work areas (e.g. firing ranges) into non-industrial work areas open for public access, otherwise delete. Surface dust sampling to determine clearance (i.e., that the work has not contaminated surfaces within and adjacent to the control area) should be performed by a third party to reduce a conflict of interest.

****

The CP shall certify in writing that the final air samples collected inside and outside the lead control area are less than 30 micrograms per cubic meter of air; the respiratory protection used for the employees was

adequate; the work procedures were performed in accordance with 29 CFR 1926.62 and 40 CFR 745; and that there were no visible accumulations of material and dust containing lead left in the work site. Do not remove the lead control area or roped off boundary and warning signs prior to the Contracting Officer's acknowledgement of receipt of the CP certification.

[The third party consultant shall certify surface wipe sample results collected inside and outside the work area are [less than 100 micrograms per \^0.1 square meter^\ \~square foot~\ on uncarpeted floors, less than 500 micrograms per \^0.1 square meter^\ \~square foot~\ on interior window sills and less than 800 micrograms per \^0.1 square meter^\ \~square foot~\ on window troughs] [not significantly greater than the initial surface loading determined prior to work].]

[For exterior MCL work, soil samples taken at the exterior of the work site shall be used to determine if soil lead levels had increased at a statistically significant level (significant at the 95 percent confidence limit) from the soil lead levels prior to the MCL operation. If soil lead levels do show a statistically significant increase above any applicable federal or state standard for lead in soil, the soil shall be remediated back to the pre-MCL operation level.]

3.2.4.3 [Testing of Material Containing Lead Residue

****
NOTE: Include this paragraph when the residue content is questionable with respect to its lead content, otherwise delete.
****

Test MCL residue in accordance with 40 CFR 261 for hazardous waste.]

3.2.4.4 Disposal

****
NOTE: Notify the activity that Federal regulations (40 CFR 260-265) require a USEPA generator identification number for use on the Uniform Hazardous Waste Manifest prior to commencement of removal work.
****

****
NOTE: Research State, regional, and local laws, regulations, and statutes and revise the specifications accordingly. Proper segregation and handling of waste can significantly reduce the generated volume (and cost) of disposing hazardous wastes.
****

****
NOTE: Research State, regional, and local requirements regarding the recycling of lead wastes. Ensure that other hazardous components are not present. The entire waste stream or discreete portions of the waste may be appropriately packaged and transported for recycling.
****

a. All material, whether hazardous or non-hazardous shall be disposed

in accordance with all laws and provisions and all federal, State or local regulations. Ensure all waste is properly characterized. The result of each waste characterization (TCLP for RCRA materials) will dictate disposal requirements.

b. Contractor is responsible for segregation of waste. Collect lead-contaminated waste, scrap, debris, bags, containers, equipment, and lead-contaminated clothing which may produce airborne concentrations of lead particles. Label the containers in accordance with 29 CFR 1926.62 and 40 CFR 261. Dispose of lead-contaminated waste material at an [EPA] [or] [State] approved hazardous waste treatment, storage, or disposal facility off Government property.

c. Store waste materials in U.S. Department of Transportation (49 CFR 178) approved \^208 liter^\ \~55 gallon~\ drums. Properly label each drum to identify the type of waste (49 CFR 172) and the date the drum was filled. The Contracting Officer or an authorized representative will assign an area for interim storage of waste-containing drums. Do not store hazardous waste drums in interim storage longer than 90 calendar days from the date affixed to each drum.

d. Handle, store, transport, and dispose lead or lead-contaminated waste in accordance with 40 CFR 260, 40 CFR 261, 40 CFR 262, 40 CFR 263, 40 CFR 264, and 40 CFR 265. Comply with land disposal restriction notification requirements as required by 40 CFR 268.

3.2.5 Disposal Documentation

****
NOTE: Include the following paragraph if the Contractor is to dispose of hazardous waste.
****

Submit written evidence that the hazardous waste treatment, storage, or disposal facility (TSD) is approved for lead disposal by the EPA and State or local regulatory agencies. Submit one copy of the completed manifest, signed and dated by the initial transporter in accordance with 40 CFR 262.

3.2.6 Payment for Hazardous Waste

Payment for disposal of hazardous waste will not be made until a signed copy of the manifest from the treatment or disposal facility certifying the amount of lead-containing materials delivered is returned and a copy is furnished to the Government.

****
NOTE: Suggestions for improvement of this specification will be welcomed using the Navy "Change Request Forms" subdirectory located in SPECSINTACT in Jobs or Masters under "Forms/Documents" directory or DD Form 1426. Suggestions should be forwarded to:

Commanding Officer
Naval Construction Battalion Center
NAVFAC 15G/CESO 15E

1000 23rd Avenue
Port Hueneme, CA 93043-4301

FAX: (805) 985-6465/982-5196 or DSN 551-5196

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-- End of Section --